

exposure of nearly two hours to a cold of  $-110^{\circ}$ , derived from a mixture of sulphuric ether and solid carbonic acid.

E. PRILLIEUX finds that the effect of warmth in the earth is to cause a hypertrophy of the interior of the stem in a young plant; when closely examined this is found to be accompanied by multiplication of the cell nuclei.

D. H. SCOTT, investigating the structure and development of laticiferous vessels, finds that they are developed from rows of cells, the transverse walls of which have been gradually absorbed, and, when two vessels lie side by side, the lateral walls also partially. The resorption usually takes place at an early period; in seedlings during the first stages of germination; in the secondary cortex shortly after the cells in question have separated from the cambium. The connection between distant laticiferous vessels is brought about in two ways: either by rows of cells that run transversely coalescing with each other, or by protuberances which unite in their growth, and which finally form canals similar to those of the *Conjugata*. Even before the first septa are absorbed, the cells are characterized by special contents, of which latex is probably a constituent.

**A Curious Growth of *Coreopsis*.**—Late in the summer of 1873 I observed a remarkable growth of *Coreopsis*, apparently *C. discoidea*, though the plants were so dwarfed and the floral organs so imperfectly developed that I name the species with much hesitancy.

In what is known as the "Big Woods," eight miles southwest of this place (Wheaton College, DuPage County, Illinois), there occur ponds or swamps, with no natural outlet, and bottoms of tenacious brick clay subsoil, several feet in thickness. These mud ponds or swamps are filled up by the winter and spring rains, but dry out in midsummer. The plants of which I am speaking grew *two feet above the ground* on the stems of *Cephalanthus* bushes, which were standing in one of those dried-out ponds. Long, slender roots (resembling the stems of Dodder), followed closely the fissures of the *Cephalanthus* bark down to the soil where they develop normally, thus connecting by a slender thread, as it were, the tuft of green herbage above with the moisture supplying earth below. The best developed plants were found highest up, though all were nearly on the same "horizon." Lower down I could see undeveloped seeds sticking to the bark, some of which had sprouted but failed to grow, apparently for want of moisture.

It seems most likely that the seeds floating on the surface of the water during a season of floods collected around the bushes; that the water remained standing until the time of their germination, and then began to slowly subside, and thus the roots following this retreating source of moisture-supply were led down to the ground.

The plants, as before stated, were very much dwarfed, 4 to 6

inches in height, but branching profusely, with stems varying in size from 1-16 to 1-4 inch in diameter. The roots exhibited little tendency to branch in the downward course, though in some instances dividing once or twice. If lateral fibers were developed they had mostly disappeared.—R. T. MORGAN, *Wheaton, DuPage County, Illinois.*

**The Postage on Botanical Specimens.**—In his new "*Flora of Washington.*" Mr. Ward states that "the law forbids the sending of labels, of which any part is written, as third-class matter, and it is necessary to give each label a temporary number and put with the specimen a corresponding printed figure (cut out of a calendar) and to send the labels in a letter. \* \* \* A very sensible decision was made by Postmaster-General Key that scientific labels, bills of lading, etc., if they contained nothing irrelevant, might pass with the specimens. This ruling has since been reversed as not in harmony with the spirit of the law." The writer adds that he "called personally at the Post-Office Department (Dec. 6, 1881), and was officially assured of the correctness of the statements herein made" (p. 234).

At the instance of some of my students, I applied by letter to the Department, April 25, 1882, for information as to the present ruling, receiving in reply a printed order, dated Feb. 21, 1881, signed by Postmaster-General Maynard. The part relating to botanical specimens reads as follows: "It is ordered that Section 232, Postal Regulations, be revoked, and in lieu thereof the following order is made: Mailable matter of the first-class shall embrace all matter wholly or partially in writing, except as herein provided. \* \* \* The exceptions are as follows: \* \* \* 7. Upon matter of the fourth-class the sender may write his own name and address preceded by the word 'from,' and also the number and names of the articles enclosed. He may also write upon or attach to any such articles, by tag or label, a mark or number, name or letter, for purpose of identification." The italicised words, not italicised in the order, were underscored in the copy sent to me. A knowledge of this fact may spare exchanging botanists some annoyance.—Wm. TRELEASE, Madison, Wis.

**Ferns of Iowa.**—Miss MARY E. WOOD reports the following ferns collected by her on the Makoqueta River, about fifty miles west of Dubuque, Iowa:

*Asplenium felix-femina*, *A. thelypteroides*, *A. angustifolium*, *Aspidium Goldianum*, *A. Thelypteris*, *Adiantum pedatum*, *Camptosorus rhizophyllus*, *Cystopteris bulbifera*, *C. fragilis*, *Onclea sensibilis*, *Osmunda Claytoniana*, *Phegopteris hexagonoptera*, *Botrychium ternatum*, *Pellaea atropurpurea*, *P. gracilis*, *Pteris aquilina*, *Struthiopteris Germanica*.